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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James R. Bonds and Richard B. Barrett
Serial No.: 09/556,200
Filed: April 21, 2000
For: An In-Situ Standard for Temperature Indicating Labels.
Art Unit: 2859
Examiner: Yaritza Guadalupe

TRANSMITTAL OF APPEAL BRIEF

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Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

S I R:

Enclosed is an original brief to the Board of Patent Appeals and Interferences and three photocopies thereof. This brief is being filed pursuant to the Notice of Appeal dated October 29, 2003 (return postcard dated October 31, 2003). The fee for filing an appeal brief pursuant to 37 C.F.R. §1.17 is enclosed. Any other fees may be charged to Deposit Account 50-1145, Order No. 3029-108.

Respectfully submitted,

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Before the Board of Patent Appeals and Interferences

Application Serial No. 09/556,200

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AN IN-SITU STANDARD FOR TEMPERATURE INDICATING LABELS

Ex parte: James R. Bonds and Richard B. Barrett

BRIEF FOR THE APPELLANTS

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Pitney, Hardin, Kipp & Szuch LLP
Attorneys for the Appellants

I. REAL PARTY IN INTEREST

The real party in interest is assignee Cordis Corporation. Tempil, Inc., which is a business unit of Illinois Tool Works Inc., further has an interest in the invention.

II. RELATED APPEALS AND INTERFERENCES

None. However, this application was previously under appeal (Appeal Brief filed November 21, 2002, as per date-stamped return postcard). Prosecution was re-opened by the Office Communication of February 5, 2003.

III. STATUS OF CLAIMS

Claims 1, 2, 4-12, 14 and 15 are rejected.

Claim 13 is allowed.

Claim 3 is canceled.

IV. STATUS OF AMENDMENTS

No amendment was filed in response to the final Office Action of July 29, 2003.

V. SUMMARY OF INVENTION

An embodiment of the invention is a label (Fig. 1, elements 10, 10', 10'') with irreversibly fusible material which permanently fuses and changes color after exposure to a selected threshold temperature (page 11, lines 4-12). The label, however, during manufacture (and prior to use by a user), is initially selectively fused in situ in order to create a contrasting pattern between the selectively fused (Figs. 1 and 2, element 20) and the unfused portions (Figs.

1 and 2, element 22). This initial selective fusing during the manufacturing process (prior to use by a user) may be performed by direct contact with a heated surface, such as hot stamping, or by radiant energy from an infra-red lamp (Figs. 3, 4 and 5). Other methods may be used to create the contrasting pattern, in situ, between the fused and unfused portions.

Alternatively, incompletely obscuring the functional surface of the indicator may be achieved by printed a pattern of fusible material (Fig. 6, element 32) on an absorptive surface (Fig. 6, element 30) which allows a portion of the surface to remain visible. Subsequent melting and fusing of the fusible material would result in the unobscured view of the functional surface of the indicator (page 13, line 12 – page 14, line 2).

A further alternative is to place a fully coated surface in proximity to wholly uncoated surface during construction of the label. For example, white (coated) and black (uncoated) semi-circles (Fig. 7, elements 50 and 52, respectively) could be joined to give the appearance of a half white and half black circle (Fig. 7). Subsequent fusing of the coated surface would result in a uniform black appearance (page 14, lines 3 – 8).

VI. ISSUES

1. Are claims 1-2, 4-6, 12, 14 and 15 indefinite under 35 U.S.C. §112, second paragraph?
2. Are Claims 1-2 and 14-15 anticipated under 35 U.S.C. §102(b) by the Speelman reference (U.S. Patent No. 5,158,363)?
3. Are Claims 1-2, 4-6, 11-12 and 14-15 anticipated under 35 U.S.C. §102(b) by the Prusik reference (U.S. Patent No. 5,709,472)?

4. Are Claims 7-10 obvious under 35 U.S.C. §103(a) over the Prusik reference in view of the Haas reference (U.S. Patent No. 5,719,828)?

VII. GROUPING OF CLAIMS

Claim 1 and claims dependent thereon stand separate from Claim 14 and claims dependent thereon in the grounds of rejection as Claims 1 and 14 are separate independent claims. Otherwise, the claims are deemed to stand or fall together for each ground of rejection.

VIII. ARGUMENTS

1. Are claims 1-2, 4-6, 12, 14 and 15 indefinite under 35 U.S.C. §112, second paragraph?

Independent Claim 1 recites “a first portion of said layer of material is initially free from exposure to said threshold temperature prior to use by a user and is thereby fusible which provides said first appearance to said first portion” (emphasis added) and similarly recites “a second portion of said layer of material is initially exposed to said threshold temperature prior to use by a user and thereby is fused which provides said second appearance to said second portion”. Claim 14 includes similar language.

The Office Action of July 29, 2003 states “How can the layer of material being [sic] fused ‘prior to use by a user?’” (page 2, numbered paragraph 2 of Office Action). Similarly, page 6, numbered paragraph 9 of the Office Action appears to be skeptical that the second portion can be initially exposed to the threshold prior to use. It is respectfully submitted that the claims and specification are clear that the second portion is exposed to the temperature threshold during manufacture, prior to use (see, for instance, the paragraph bridging pages 12 and 13 of the

specification). The Appellants respectfully submit that it is clear from the disclosure and claims that the second portion of the layer is fused during the manufacturing process, so that the user receives the material with the first portion unfused (that is, still fusible, or free from exposure to the threshold temperature) and the second portion fused. The subsequent use by the user may result in the fusing of the first portion, so that both the first and second portions are fused after use by a user. It is respectfully submitted that such language is definite and clear and meets the standards of 35 U.S.C. §112, second paragraph. It is further respectfully submitted that once this language is given its proper weight and interpretation and it is appreciated that the second portion of the layer can be fused during the manufacturing process, prior to use, that the prior art rejections will be overcome.

2. Are Claims 1-2 and 14-15 anticipated under 35 U.S.C. §102(b) by the Speelman reference (U.S. Patent No. 5,158,363)?

The Speelman reference, in column 3, lines 57-60, states that “Prior to exposure to steam, steam sterilization indicator is in a clear state, as shown in Figure 3. In a clear state, steam indicating ink 32 has not change color and *tablet 16 has not melted.*” (italicization added). It appears that the Office Action is asserting that tablet 16 is somehow the second portion of the material which is fused by initial exposure to said threshold temperature prior to use by a user. However, it is respectfully submitted that it is clear that the Speelman reference is avoided by the present claims in that the steam technician mentioned in column 3, line 60 is not provided with tablet 16 already fused prior to use by the steam technician.

It is therefore respectfully submitted that the above-identified claims are patentable over the Speelman reference.

3. Are Claims 1-2, 4-6, 11-12 and 14-15 anticipated under 35 U.S.C. §102(b) by the Prusik reference (U.S. Patent No. 5,709,472)?

The Prusik reference discloses the use of a heat fusible material in a time temperature indicator device. However, similar to the Speelman reference, there is no manufacturing step which initially fuses a portion of the heat fusible material, while leaving another portion unfused (e.g., fusible) so that the user receives the label with a first unfused portion and a second fused portion.

It is therefore respectfully submitted that the above-identified claims are patentable over the Prusik reference.

4. Are Claims 7-10 obvious under 35 U.S.C. §103(a) over the Prusik reference in view of the Haas reference (U.S. Patent No. 5,719,828)?

It is respectfully submitted that the Haas reference does nothing to alleviate the deficiencies of the Prusik reference as described above. It is therefore respectfully submitted that Claims 7-10 are patentable over the Prusik reference in view of the Haas reference.

In view of the above, it is respectfully submitted that the pending claims are patentably distinct from the art of record.

The Board is respectfully requested to find all of the presently pending claims to be allowable.

Respectfully submitted,

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IX. APPENDIX OF PRESENTLY PENDING CLAIMS

1. A temperature indicating surface comprising:

a layer of material which substantially irreversibly changes from a first appearance to a second appearance in response to exposure to a threshold temperature, and where said material irreversibly fuses in response to said threshold temperature, wherein a first portion of said layer of material is initially free from exposure to said threshold temperature prior to use by a user and is thereby fusible which provides said first appearance to said first portion, and wherein a second portion of said layer of material is initially exposed to said threshold temperature prior to use by a user and thereby is fused which provides said second appearance to said second portion, whereby said first portion and said second portion form a visible pattern.

2. The temperature indicating surface of Claim 1 wherein subsequent exposure of said first and second portions of said layer of material to said threshold temperature produces said second appearance on said first portion, thereby resulting in a uniform appearance of said first and second portions.

3. (canceled)

4. The temperature indicating surface of Claim 1 wherein said layer of material is formed on a label.

5. The temperature indicating surface of Claim 4 wherein said label includes a support surface.
6. The temperature indicating surface of Claim 5 further including an adhesive layer on said support surface.
7. The temperature indicating surface of Claim 3 wherein said visible pattern includes text.
8. The temperature indicating surface of Claim 3 wherein said visible pattern includes cross-hatching.
9. The temperature indicating surface of Claim 3 wherein said visible pattern includes parallel dashes.
10. The temperature indicating surface of Claim 3 wherein said visible pattern includes dots.
11. The temperature indicating surface of Claim 1 wherein said second portion of said layer of material is initially exposed to said threshold temperature by direct thermal contact.
12. The temperature indicating surface of Claim 1 wherein said second portion of said layer of material is initially exposed to said threshold temperature by indirect thermal contact.

13. (allowed) A temperature indicating surface including:
 - an absorptive layer with a first pattern printed thereon;
 - a second pattern printed with irreversibly fusible material on a surface of said absorptive layer over said first pattern, thereby at least partially obscuring said first pattern; and
 - wherein said irreversibly fusible material, upon exposure to a threshold temperature, melts and is absorbed into said absorptive layer, thereby exposing said first pattern to view.
14. A temperature indicating surface including a first portion comprised of material that irreversibly fuses upon exposure to a threshold temperature thereby changing from a first appearance to a second appearance, said first portion initially being fusible prior to use by a user to provide said first appearance, and further including a second portion of said material being fused prior to use by a user to provide said second appearance.
15. The temperature indicating surface of Claim 14 wherein upon exposure to said threshold temperature, said first portion and said second portion present a substantially uniform second appearance.

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Alternatively, incompletely obscuring the functional surface of the indicator may be achieved by printed a pattern of fusible material (Fig. 6, element 32) on an absorptive surface (Fig. 6, element 30) which allows a portion of the surface to remain visible. Subsequent melting and fusing of the fusible material would result in the unobscured view of the functional surface of the indicator (page 13, line 12 – page 14, line 2).

A further alternative is to place a fully coated surface in proximity to wholly uncoated surface during construction of the label. For example, white (coated) and black (uncoated) semi-circles (Fig. 7, elements 50 and 52, respectively) could be joined to give the appearance of a half white and half black circle (Fig. 7). Subsequent fusing of the coated surface would result in a uniform black appearance (page 14, lines 3 – 8).

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wherein said irreversibly fusible material, upon exposure to a threshold temperature, melts and is absorbed into said absorptive layer, thereby exposing said first pattern to view.
14. A temperature indicating surface including a first portion comprised of material that irreversibly fuses upon exposure to a threshold temperature thereby changing from a first appearance to a second appearance, said first portion initially being fusible prior to use by a user to provide said first appearance, and further including a second portion of said material being fused prior to use by a user to provide said second appearance.
15. The temperature indicating surface of Claim 14 wherein upon exposure to said threshold temperature, said first portion and said second portion present a substantially uniform second appearance.